

cgaggagtaaa	acctgtttgtc	gatccctcag	cttcagctt	gcggcttgct	gagtggccac	60
cttctttccg	gtccccggag	ctgcggggaa	agatggaacg	gcaccagccg	cggctgcacc	120
acccggccca	aggctcagcc	gctgggactc	cctacccttc	ctcagcctct	ctccgcggct	180
gccgggaaaag	caagatgccg	cgcaggaagg	gcccccaaca	ccctccgcg	cccagtgcc	240
ccgaggagcc	tggggagaag	cgccccaaagt	ttcattttaa	tattaggaca	ctgacggatg	300
atatgctgga	caaattttgcc	agcataagaa	ttccagggag	caagaaagag	agacctccac	360
ttcccaacct	gaagactgca	tttgcaagca	gtgattgtct	agcagcacct	ttagagatga	420
tggagaactt	tccaaagcca	ctgtcagaga	atgaactctt	agaacttttt	gaaaaaatga	480
tgggaagatat	gaattttaaat	gaagataaaa	aggcaccatt	gcgggaaaag	gacttcagta	540
tcaaaaaaga	aatggtgatg	cagtacatta	atactgtctc	taagacagga	agtcttaaga	600
gaagccgaca	gacttcacct	caggaattca	ttcatagctt	gaaaatgggg	tctgcagatg	660
agagacttgt	cacatgcctg	gagtctctcc	gagtgtcttt	gaccagcaat	cctgtgagtt	720
gggtggaaaag	ctttggacat	gaagggcttg	gattattatt	agacattttg	gaaaaactga	780
ttagtggaaa	aatccaagaa	aaagttgtaa	agaaaaatca	acataaagtc	atacagtgtc	840
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tttctttatt	ggccaaagcc	gtggatccca	gacaccccaa	tatgatgaca	gatgtgggta	960
aactttctct	tgcggtatgc	attgtagggg	aagaaagcat	ccttgaagaa	gttttagaag	1020
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tccggcacaa	ttcagttcaa	ctgcaagtag	cttgtatgca	gctcatcaat	gccctgggta	1140
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tgaaagagat	attgccaaat	ttaaaatgca	ttaagaatga	tggcctggat	atccaaactta	1260
aagtctttga	tgagcataaa	gaagaagatt	tgtttgagtt	atcccatcgc	cttgaagata	1320
ttagagctga	acttgatgaa	gcatatgatg	tttacaacat	ggtgtggagc	acagttaaag	1380
aaactagagc	agagggatat	tttatttcta	ttcttcagca	tcttttgctg	attcgaaatg	1440
attattttat	aaggcaacaa	tacttcaaat	taattgatga	gtgtgtatcc	cagattgtat	1500
tgcatagaga	tggaatggat	ccagacttca	catatcgaaa	aagactagat	ttagatttaa	1560
cccagtttgt	agacattttg	atagatcaag	caaaactaga	agagtttgaa	gagaaagcat	1620
cagaacttta	caagaaattt	gaaaaagagt	ttaccgacca	ccaagaaact	caggctgaat	1680
tgcagaaaaa	agaggcaaa	attaatgagc	ttcaagcaga	gctacaagct	tttaagtctc	1740
agtttggtgc	cttgccagct	gattgttaata	ttcctttgcc	tccctctaaa	gaaggtggaa	1800
ctggccactc	agcacttcct	cctccgcctc	cactgccttc	tgggtggagg	gtgccgcctc	1860
cacctcctcc	cccaccacct	cctccacttc	caggaatgcg	gatgccattc	agtggctctg	1920
tgcctccacc	acctcccctg	ggattccttg	gaggacaaaa	ttctcctcct	ctaccaatcc	1980
tgccattttg	gttgaaacca	aagaaagaat	ttaaacctga	aatcagcatg	agaagattga	2040
attggttaaa	gatcagacct	catgaaatga	ctgaaaaactg	tttctggata	aaagtaaatg	2100
aaaaaagata	tgaaaacgtg	gatttgcttt	gtaaacctga	gaatacattt	tgttgccaac	2160
aaaaagagag	aagagaagag	gaagatattg	aagagaagaa	atcgattaag	aaaaaaatta	2220
aagaacttaa	gttttttagat	tctaaaattg	cccagaacct	ttcaatcttc	ctgagctctt	2280
ttcgggtgcc	atatgaggaa	atcagaatga	tgatatttga	agtagatgaa	acacggttgg	2340
cagagtctat	gattcagaac	ttaataaagc	atcttcctga	tcaagagcaa	ttaaattcat	2400
tgtctcagtt	caagagttaa	tatagcaact	tatgtgaacc	tgagcagttt	gtggttgatg	2460
tgagcaatgt	gaagagacta	cggccacggc	tcagtgtcat	tctctttaag	cttcagtttg	2520
aagagcaggt	gaacaacatc	aaacctgaca	tcattggtgt	cagtactgcc	tgcaagagaa	2580
taaagaagag	caaaagcttt	agcaagttgc	tggaaacttg	attgctaattg	ggaaactaca	2640
tgaatgctgg	ctcccggaa	gctcaaacct	tccgatttaa	ccttagctct	ctctgtaaac	2700
taaaggacac	aaaatcagca	gatcagaaaa	caacgctact	tcatttcctg	gtagaaatat	2760
gtgaagagaa	gtaccctgat	atactgaatt	ttgtggatga	tttggaacct	ttagacaaa	2820
ctagtaaagt	ctctgtagaa	acgctggaaa	agaatttgag	gcagatggga	aggcagcttc	2880
aacagcttga	gaaggaattg	gaaacctttc	cccctcctga	ggacttgcat	gacaagtttg	2940
tgacaaagat	gtccagattt	gttatcagtg	caaaagaaca	atatgagaca	ctttcgaagt	3000
tacacgaaaa	catggaaaag	ttataccaga	gtataatagg	atactatgcc	attgatgtga	3060
agaaggtgtc	tgtggaagac	tttcttactg	acctgaataa	cttcagaacc	acattcatgc	3120
aagcaataaa	ggagaatatc	aaaaaaagag	aagcagagga	aaaaagaaaa	cgtgtcagaa	3180
tagctaaaga	attagcagag	cgagaaagac	tcgaacgcca	acaaaagaaa	aagcgtttat	3240
tagaaatgaa	gactgagggt	gatgagacag	gagtgatgga	taatctgctg	gaggccttgc	3300
agtccggggc	tgccttccgc	gacagaagaa	aaaggacacc	gatgccaaaa	gatgttcggc	3360

FIG. 1A

agagtctcag	tccaatgtct	cagaggcctg	ttctgaaagt	ttgtaaccat	gaaaatcaga	3420
aagtgcagtt	aacagaaggg	tcacgttcac	actacaatat	caattgcaac	tcaacaagga	3480
ctccagtcgc	caaggagctt	aattataatc	tagacactca	tacgtctact	agggaggatc	3540
aaggcagctg	agaagaagga	agcgtgtaat	gtagaaagca	acagaaaaaa	ggaaacggaa	3600
cttcttggct	ctttttctaa	aaatgaatca	gttcccgaag	ttgaagccct	gctggcaaga	3660
ttacgagctt	tataagttaa	actggttttt	aaaaaaatga	ttaagccaaa	tataaagcca	3720
tgctctaaac	tatacccttg	aaaaaattgc	tttatgtaag	tgacttatat	agtttaaatt	3780
atgatatata	tagaaaaata	aagctaaata	tatgattgca	atgcttttct	atgtactgga	3840
ggttttgggt	attcaagatt	gtaccggctt	aatccttttt	ttttttttgt	ctcctgggtat	3900
tcctcagttc	tttatttggg	ggttaaatta	tacatattgc	tttagagagc	aggtaggtgg	3960
ccatgtgttc	agcagtgtgt	ccttaagaaa	ataccatctt	tctaagccac	tggaattttt	4020
actttactat	ttttaacatt	aatggatgtc	aggtcaccaa	cctcaagtct	ttacatatcc	4080
atgtatatcc	catatatatt	gtttatatag	gcccaagttt	ctccttaatt	gggatctata	4140
tactaccagc	acaacatcaa	aaacatgtaa	ttgaatacat	cagagctata	tatgtaagga	4200
aatgactggg	gaccccatca	tcatcattgt	tgaattcatg	ttaaagtagac	cctctagggg	4260
accataaggc	aattgagcac	ataacgaaaa	atgatgcaat	aagaatgtat	gcactctctt	4320
tgccaaatgc	a					4331

FIG. 1B

tacccttctcagcctctctccgcggtgccgggaaagcaagatgccgcgcaggaagggc 120
Y P S S A S L R G C R E S K M P R R K G

ccccaacaccctccgcccagtggtcccgaggagcctggggagaagcgccccagttt 180
P Q H P P P P S G P E E P G E K R P K F

catttaaataattaggacactgacggatgatatgctggacaaatttgccagcataagaatt 240
H L N I R T L T D D M L D K F A S I R I

ccaggagcaagaaagagagacctccacttcccaacctgaagactgcatttgcaagcagt 300
P G S K K E R P P L P N L K T A F A S S

gattgctcagcagcaccttttagagatgatggagaactttccaaagccactgtcagagaat 360
D C S A A P L E M M E N F P K P L S E N

gaactcttagaactttttgaaaaaatgatggaagatatgaatttaaataagataaaaaag 420
E L L E L F E K M M E D M N L N E D K K

gcaccattgcgggaaaaggacttcagtatcaaaaaagaaatggtgatgcagtacattaat 480
A P L R E K D F S I K K E M V M Q Y I N

actgcttctaagacaggaagtcttaagagaagccgacagatctcacctcaggaattcatt 540
T A S K T G S L K R S R Q I S P Q E F I

catgagctgaaaatggggtctgcagatgagagacttgtcacatgcctggagtctctccga 600
H E L K M G S A D E R L V T C L E S L R

gtgtctttgaccagcaatcctgtgagttgggtggaaagctttggacatgaagggttgga 660
V S L T S N P V S W V E S F G H E G L G

ttattattagacatttttgaaaaactgattagtggaaaaatccaagaaaaagttgtaaag 720
L L L D I L E K L I S G K I Q E K V V K

aaaaatcaacataaagtcatacagtgctctaaaagccctgatgaatacgcagtatggcttg 780
K N Q H K V I Q C L K A L M N T Q Y G L

gaaagaattatgagtgaggagaggagccttttcttattggccaaagccgtggatcccaga 840
E R I M S E E R S L S L L A K A V D P R

cacccaatatgatgacagatgtggttaaacttctctctgcggtatgcattgtaggggaa 900
H P N M M T D V V K L L S A V C I V G E

gaaagcatccttgaagaagttttagaagctttaacttcagctggtgaagaaaaaaaaaatt 960
E S I L E E V L E A L T S A G E E K K I

gacagatttttttgtattgtggaaggcctccggcacaattcagttcaactgcaagtagct 1020
D R F F C I V E G L R H N S V Q L Q V A

tgtatgcagctcatcaatgccctgggttacatctcctgatgatttgatttcaggcttcac 1080
C M Q L I N A L V T S P D D L D F R L H

atcagaaatgaatttatgcgttgtggattgaaagagatatggccaaatttaaaatgcatt 1140
I R N E F M R C G L K E I L P N L K C I

aagaatgatggcctggatatccaacttaagtcctttgatgagcataaagaagaagatttg 1200
K N D G L D I Q L K V F D E H K E E D L

FIG. 2A

tttgagttatcccatcgcttgaagatattagagctgaacttgatgaagcatatgatgtt 1260
F E L S H R L E D I R A E L D E A Y D V

tacaacatggtgtggagcacagttaaagaaactagagcagagggatattttatttctatt 1320
Y N M V W S T V K E T R A E G Y F I S I

cttcagcatcttttgctgattcgaaatgattattttataaggcaacaatacttcaaatta 1380
L Q H L L L I R N D Y F I R Q Q Y F K L

attgatgagtgtgtatcccagattgtattgcatagagatggaatggatccagacttcaca 1440
I D E C V S Q I V L H R D G M D P D F T

tatcgaaaaagactagatttagatttaacccagttttagacatttgcatagatcaagca 1500
Y R K R L D L D L T Q F V D I C I D Q A

aaactagaagagtttgaagagaaagcatcagaactttacaagaaatttgaaaaagagttt 1560
K L E E F E E K A S E L Y K K F E K E F

accgaccaccaagaaactcaggctgaattgcagaaaaaaggcagaaagattaatgagctt 1620
T D H Q E T Q A E L Q K K E A K I N E L

caagcagagctacaagcttttaagtctcagtttggccttgccagctgattgtaatatt 1680
Q A E L Q A F K S Q F G A L P A D C N I

cctttgcctccctctaaagaaggtggaactggccactcagcacttcctcctccgctcca 1740
P L P P S K E G G T G H S A L P P P P P

ctgccttctggtggaggggtgccgcctccacctcctccccaccacctcctccacttcca 1800
L P S G G G V P P P P P P P P P P P L P

ggaatgcggtgattgccattcagtggtcctgtgcctccaccacctcccctgggattccttga 1860
G M R M P F S G P V P P P P P P L G F L G

ggacaaaattctcctcctctaccaatcctgccatttgggttgaaaccaaagaaagaattt 1920
G Q N S P P L P I L P F G L K P K K E F

aaacctgaaatcagcatgagaagattgaattggttaaagatcagacctcatgaaatgact 1980
K P E I S M R R L N W L K I R P H E M T

gaaaactgtttctggataaaaagtaaataagtaataagtaataagtaataagtaataag 2040
E N C F W I K V N E N K Y E N V D L L C

aaacttgagaatacatatttgttgccaacaaaaagagagaagagaagaggaagatattgaa 2100
K L E N T F C C Q Q K E R R E E E D I E

gagaagaaatcgattaagaaaaaaattaaagaacttaagtttttagattctaaaattgcc 2160
E K K S I K K K I K E L K F L D S K I A

cagaacctttcaatcttctcctgagctcttttcgggtgccatattgaggaaatcagaatgatg 2220
Q N L S I F L S S F R V P Y E E I R M M

atattggaagtagatgaaacacggttgccagagtctatgattcagaacttaataaagcat 2280
I L E V D E T R L A E S M I Q N L I K H

cttctgatcaagagcaattaaattcattgtctcagttcaagagtgaatatagcaactta 2340
L P D Q E Q L N S L S Q F K S E Y S N L

FIG. 2B

```

tgtgaacctgagcagttttgtggttgatgagcaatgtgaagagactacggccacggctc 2400
C E P E Q F V V V M S N V K R L R P R L

agtgctatttctctttaagcttcagtttgaagagcaggtgaacaacatcaaacctgacatc 2460
S A I L F K L Q F E E Q V N N I K P D I

atggctgtcagtactgcctgcgaagagataaagaagagcaaaagcttttagcaagttgctg 2520
M A V S T A C E E I K K S K S F S K L L

gaacttgatttgctaattgggaaactacatgaatgctggctcccgggaatgctcaaaccttc 2580
E L V L L M G N Y M N A G S R N A Q T F

ggatttaaccttagctctctctgtaaaactaaaggacacaaaatcagcagatcagaaaaca 2640
G F N L S S L C K L K D T K S A D Q K T

acgctacttcatcttcctggtagaaatatgtgaagagaagtaccctgatatactgaatttt 2700
T L L H F L V E I C E E K Y P D I L N F

gtggatgatttggaaccttttagacaaagctagtaaagtctctgtagaaacgctggaaaag 2760
V D D L E P L D K A S K V S V E T L E K

aatttgaggcagatgggaaggcagcttcaacagcttgagaaggaattggaaacctttccc 2820
N L R Q M G R Q L Q Q L E K E L E T F P

cctcctgaggacttgcatgacaagtttgtgacaaagatgtccagatttgttatcagtgc 2880
P P E D L H D K F V T K M S R F V I S A

aaagaacaatatgagacactttcgaagttacacgaaaacatggaaaagttataccagagt 2940
K E Q Y E T L S K L H E N M E K L Y Q S

ataataggatactatgccattgatgtgaagaaggtgtctgtggaagactttcttactgac 3000
I I G Y Y A I D V K K V S V E D F L T D

ctgaataacttcagaaccacattcatgcaagcaataaaggagaatatcaaaaaaagagaa 3060
L N N F R T T F M Q A I K E N I K K R E

gcagaggaaaaaagaaaaacgtgtcagaatagctaaagaattagcagagcgagaaaagactc 3120
A E E K E K R V R I A K E L A E R E R L

gaacgccacaacaaaagaaaaagcgtttattagaaatgaagactgagggtgatgagacagga 3180
E R Q Q K K K R L L E M K T E G D E T G

gtgatggataatctgctggaggccttgagtcgggggctgccttccgcgacagaagaaaa 3240
V M D N L L E A L Q S G A A F R D R R K

aggacaccgatgccaaaagatgttcggcagagtcctcagtcgaatgtctcagaggcctgtt 3300
R T P M P K D V R Q S L S P M S Q R P V

ctgaaagtttgtaaccatgaaaatcagaaagtgcagttaacagaagggtcacgttcacac 3360
L K V C N H E N Q K V Q L T E G S R S H

tacaatatcaattgcaactcaacaaggactccagtcgccaaggagcttaattataatcta 3420
Y N I N C N S T R T P V A K E L N Y N L

gacactcatagctctactaggaggatcaaggcagctga 3480
D T H T S T R E D Q G S *

```

FIG. 2C

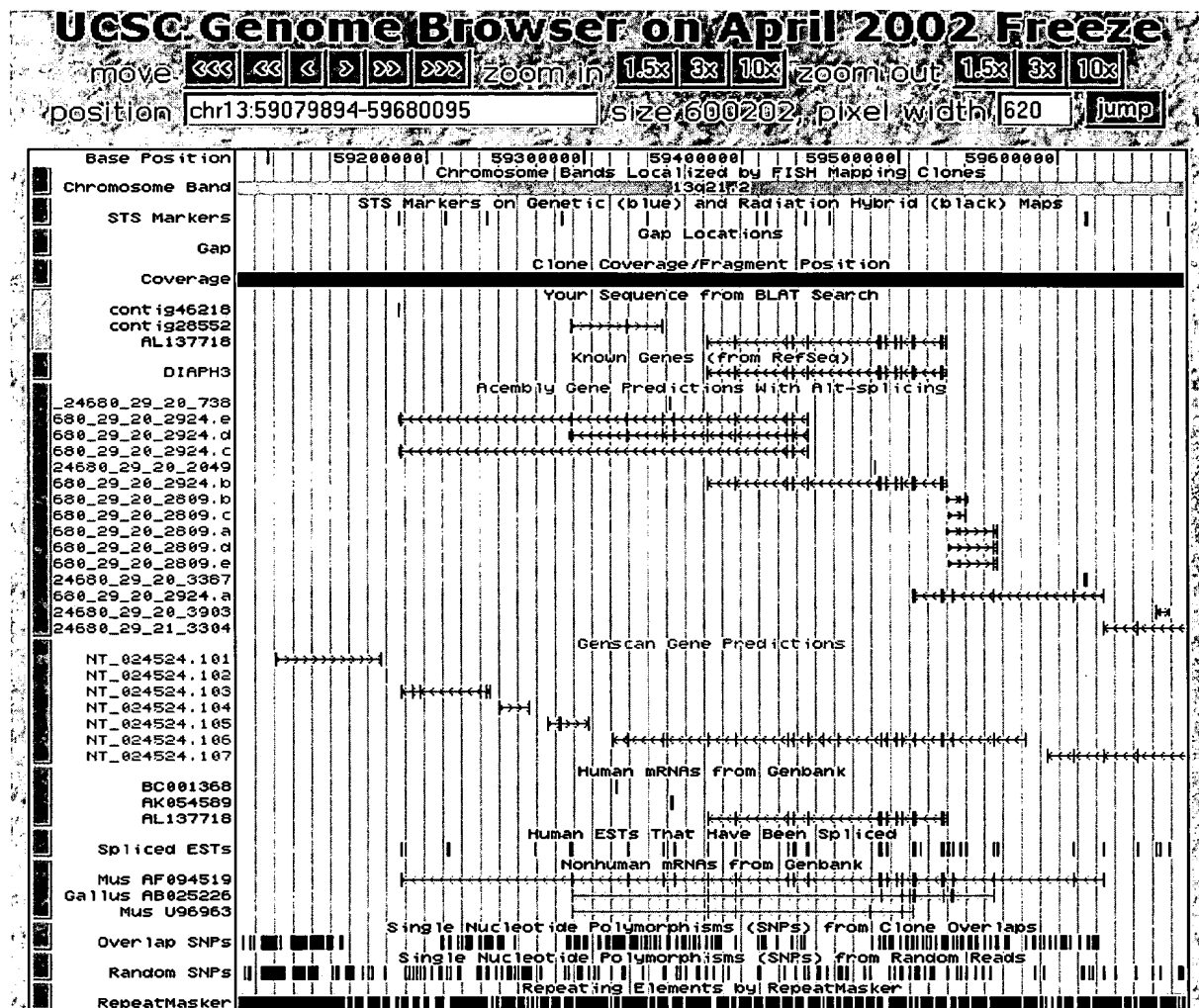


FIG. 3

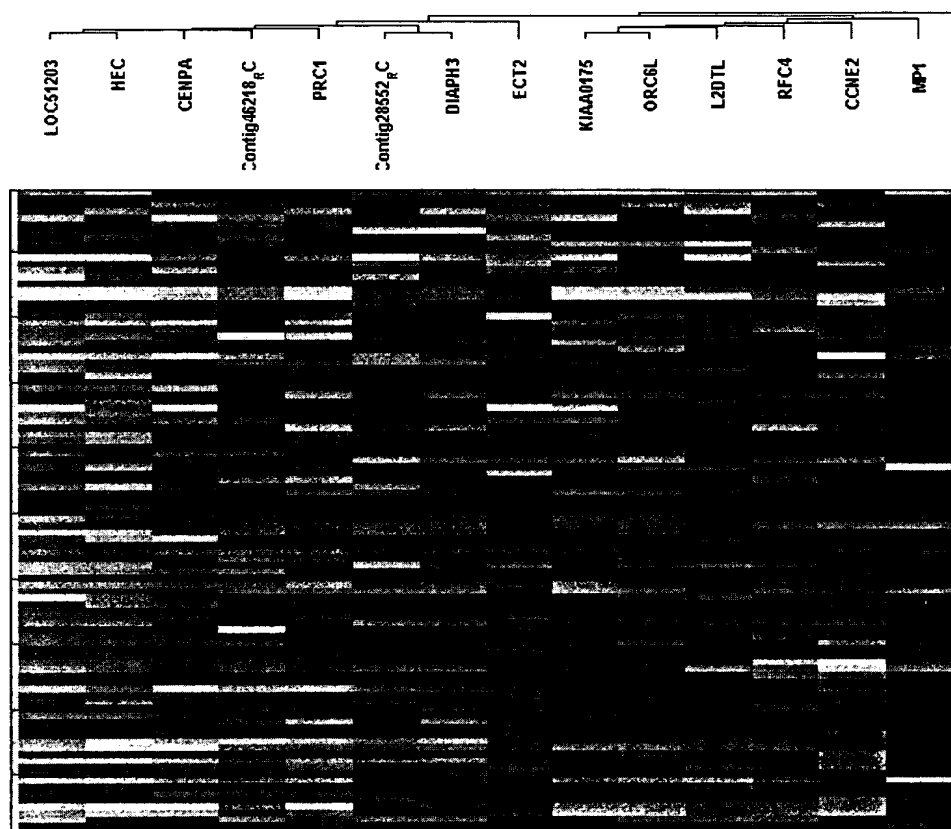


FIG. 4

Crystal Violet at 72 hrs

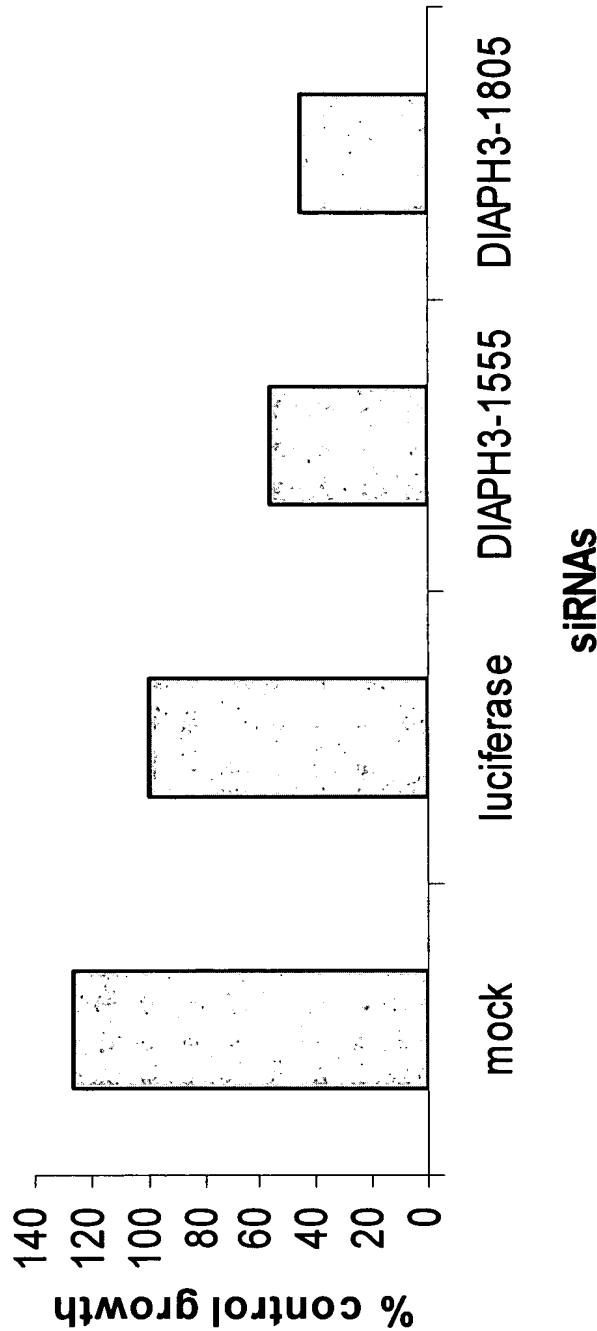


FIG. 5

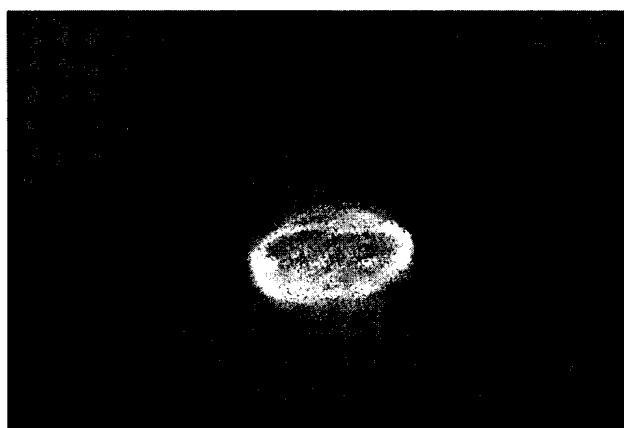


FIG. 6A

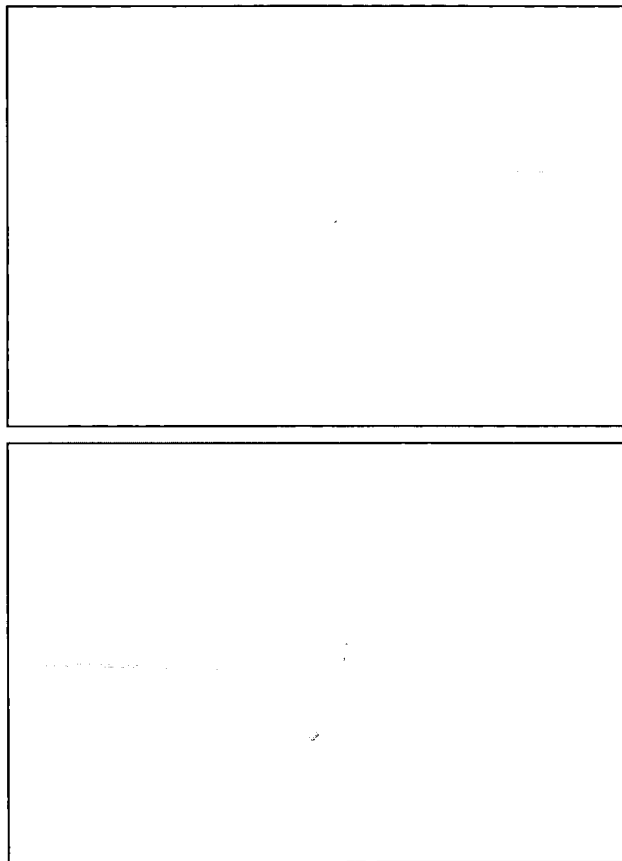


FIG. 6B

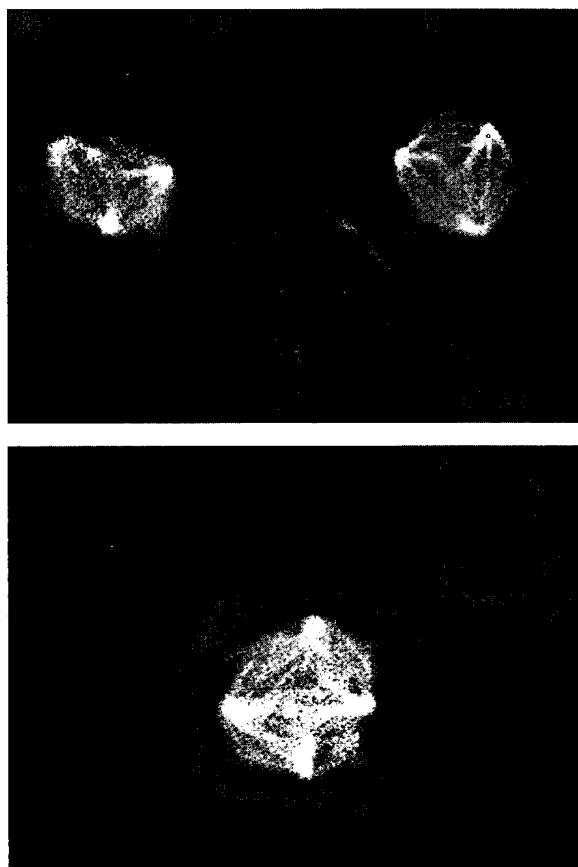


FIG. 6C

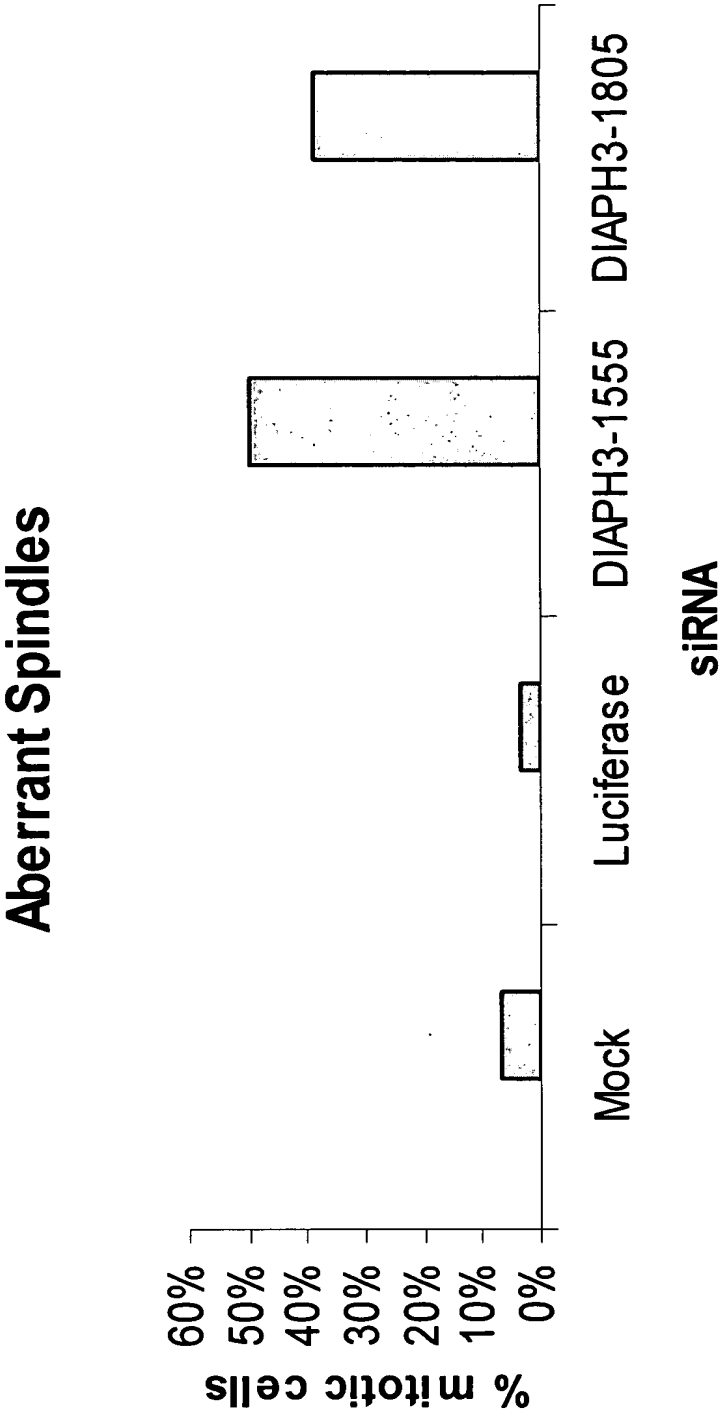


FIG. 7



FIG. 8A



FIG. 8B

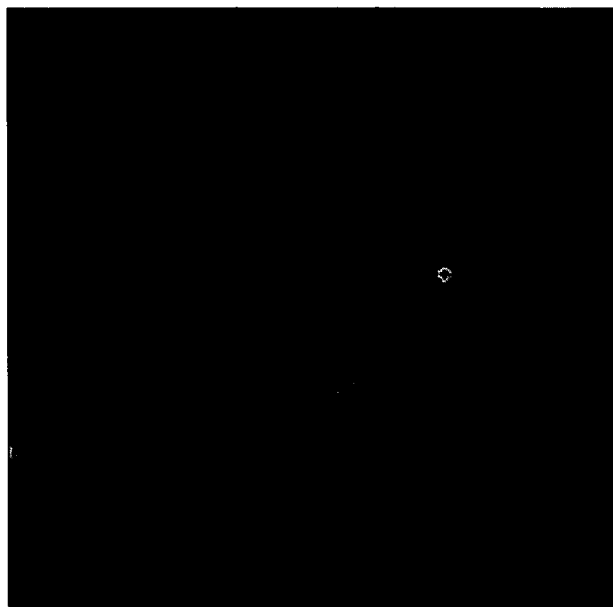


FIG. 8C

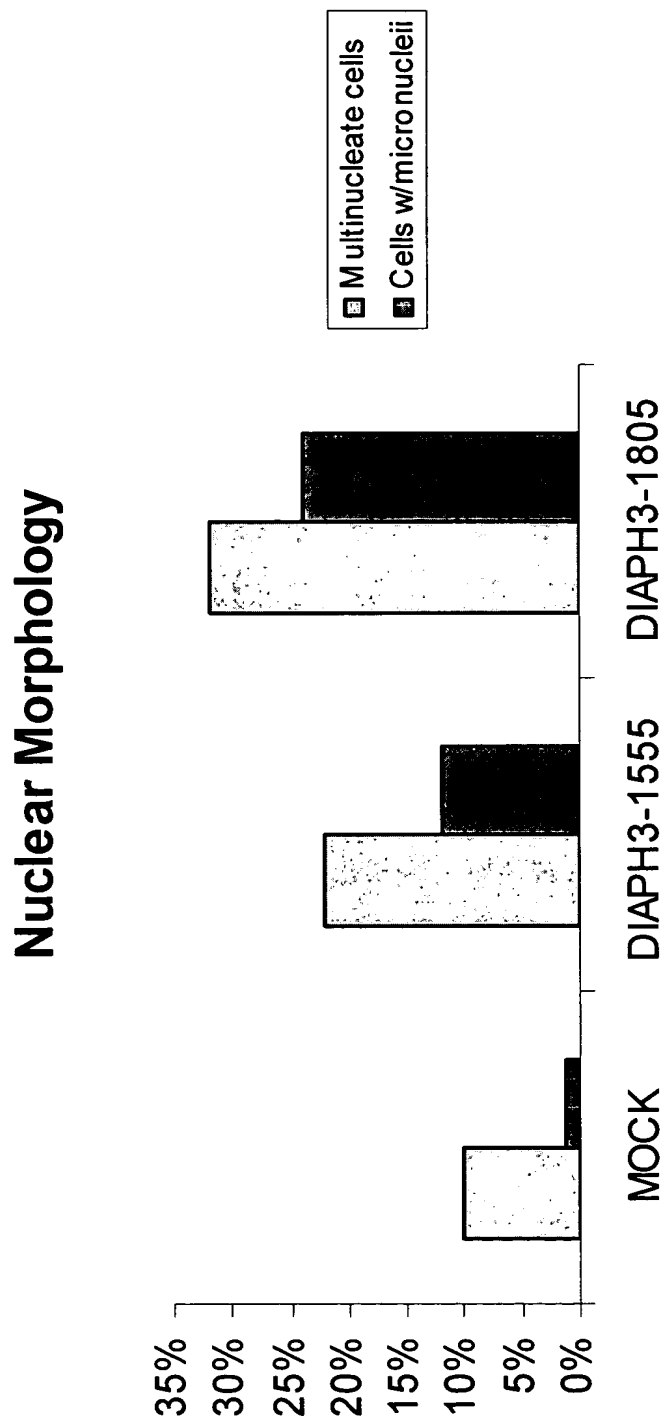


FIG. 9